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THE MACDONALD LASSIE



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## Journal Jottings

Each issue is different and all are interesting but for the most part the copy comes across the desk, sometimes without personal contact, is duly edited and slated for a particular spot in the magazine. But ask for an article on silos and you're in for a heated battle that at times makes an election campaign seem like a friendly fireside chat.

It seems that there are bunker silo men and then there are tower silo men and as the charts, copy and photos for the article "Forage Storage" by Post Graduate student, Bruce Narsted, were gradually being assembled, there always seemed to be at least two men on either side of the fence, or should I say desk, discussing the pros and cons of the various types of silos.

"A bunker silo is useless unless it's 50 feet deep," said one. "Non-sense," was the reply. "It's the up-and-coming thing. Think of the man hours saved, think of the economy." "Up-and-coming. Here maybe. Everywhere else it's been, it went." And on and on the arguments would go. "I bet there's 25 per cent wastage in a bunker." "Never — two per cent at the most." There was more but I'm afraid that when they started getting really technical I tuned out.

Then there was the small matter of getting an "action" shot of a bunker silo. No problem, or so we thought. We'd just round up a few of the Aberdeen Angus herd pasturing near the bunker silo on the Farm and, with photographer at the ready, we'd get our picture. We did get a minor stampede but not one critter could we coax into posing for us. To add insult to injury, as we drove off with our photo of an empty bunker silo, we saw the proverbial contented beasts gathered around a feed

trough eating their hearts out!

Do read the article on forage storage. Maybe you'll join in the argument or, as seems to be the case around here, your mind is already made up. As for me, I think I'll ask the cows where they prefer their silage to be stored. But this time I'll go to a Holstein for help — she may just be more cooperative.

But then that could start off an entirely new argument. Just as a child prefers candy to spinach, the cow's choice may not necessarily be the right one. At this point I think I'll try to find an election campaign. It might be more peaceful.

Hazel M. Clarke



# Guest Editorial

## The Law and Orderly Marketing

A news item from Quebec states that the Quebec Agricultural Marketing Board Authority has decided to conduct a special inquiry into wholesale milk prices in the Montreal region. Apparently there are grounds to believe that some dairies are breaking a clause in the Marketing Board order by granting discounts to certain grocery chains. The order in question lays down the price of fluid milk delivered to a grocery or restaurant at \$0.26 to \$0.31 in quart sized containers, \$0.51 to \$0.61 in half-gallon, \$0.75 to \$0.90 for three quarts and \$0.96 to \$1.16 a gallon in containers of one or more gallons.

The Quebec Agricultural Marketing Board Authority was established over 10 years ago. The responsibility for milk pricing was transferred from the old Dairy Commission to the new Board. Many people do not remember that the Dairy Commission set prices for fluid

milk and that the Government that time had to sanction each Dairy Commission order. Today the Marketing Board Authority has the final decision. When there are objections to the Board rulings, an appeal can be made directly to the Cabinet.

Milk supplies and prices have always been of great public interest. The public is aware of the price setting powers of the Marketing Board Authority. Following public hearings, there is generally quite a flurry of interest in milk marketing by the large daily papers. It is quite natural for both consumers and farmers to suppose that all farm commodities are eligible for the same price setting procedure. The price setting mechanism is unique to fluid milk. All other farm commodities are subject to price negotiations between the producers usually represented by the Joint Marketing Plan and the purchaser,

or group of purchasers such as in the case of eggs, the Egg Distributors Association. There is no question of setting retail prices but there is provision for binding arbitration similar to that found in labour agreements.

The hearings concerning the wholesale price of milk are designed to insure that the price ranges established for each level of marketing are respected. The minimum price is part of a legal market order. It is to be hoped that if there have been illegal discounts at the wholesale level, the full sanctions of the law will be applied. Too often in the past, large food organizations have not been subject to more than token fines and reprimands. There, as in all other sectors of the food supply chain, folk-lore should be set aside. Business must be conducted according to the established law or contracts which ever the case may be.

Gordon Thomson

## Dr. Eric O. Callen

Dr. Eric O. Callen, Associate Professor in the Department of Plant Pathology at Macdonald College, died suddenly of a heart attack on August 22. He was working with an archeological expedition at Ayacucho, in the Andes Mountains in Peru, on his research specialty, the plants used for food by American Indians before the arrival of Europeans.

Dr. Callen developed methods for analyzing mummified remains found in caves high in the mountains of Mexico and South America. His results have greatly extended modern knowledge of prehistoric diets in the Americas, of the use and domestication of wild plants by primitive peoples, and of the beginnings of agriculture. He was recognized as a world authority in his field of Ethnobotany.

He taught many courses in botanical subjects since his appointment to the staff of Macdonald College in 1947, and also did research on plant taxonomy.

His interest in students was even deeper than his interest in science, and he was constantly involved in student activities at their request. He was Chief Examiner in Biology (Protestant Schools) in the Department of Education for many years.

A Scot and proud of it, Dr. Callen was born in 1912. He was educated at George Heriot's School in Edinburgh. He received the B.Sc. (Honours) degree in 1936, and the Ph. D. in 1939, both from the University of Edinburgh. He was a Silver medalist in languages at school. This ability was put to use during the second world war, when he worked in the Intelligence Service.

He was elected a Fellow of the Botanical Society of Edinburgh, and a Fellow of the Linnaean Society of London; he held memberships in numerous scientific societies. He contributed many articles to scientific journals and books, and was invited to participate in international congresses in the United States and in South America.



He is survived by his wife Leila Anne, and by two sons, Lieutenant Thomas Robert, of the Canadian United Nations force in Cyprus, and Robert Gordon, attending Marianopolis. To the members of his family, the Faculty, staff and students of Macdonald College extend their sympathies.

For his academic achievements, his devotion to his students, and the respect and admiration he gained from his colleagues, Eric Callen will be long remembered.



# forage

Forage stored in silos is becoming increasingly important in Quebec, particularly low-moisture grass silage (haylage), and corn silage. It is also becoming clear that farm operators must recognize the critical points in silage making. Poor silage management can result in losses of 50 per cent or more of the total dry matter stored. Some cases, such as the collapse of a tower silo or poor construction of bunker silos combined with failure to pack the silage, can result in complete loss of the harvest.

The production of silage is a complex of chemical and bacterial changes within the silage and consists of essentially two phases; aerobic or oxygen consuming and anaerobic or non-oxygen consuming phases. The complete silage process is usually completed within 21 days for 65-70 per cent moisture grass-legume silage. When placed in the silo the green material respire, using oxygen that is trapped in the mass of material. Large volumes of  $\text{CO}_2$  are evolved and temperatures increase to around 90 or 100°F. This is the aerobic phase. The second or anaerobic phase begins following the exhaustion of oxygen and is characterized by bacterial action. At this point some of the starch present will have been converted to sugar. This is used by anaerobic bacteria to produce acids and alcohol — the fermentation process. Many types of bacteria are originally present, producing acetic, butyric, propionic and lactic acids. As fermentation continues, the acidity increases and acid tolerant lactic acid bacteria take over.

Continued increase in acidity stops the activity of these bacteria and silage making is complete. Any factor which prolongs the aerobic stage, that is increases the time that oxygen is available to the silage, will result in a bad material which must be thrown out.

Storage losses of silage are usually presented as the total percentage of dry matter lost, either as seepage, gas loss or rotted material. Aside from moisture content, the type of structure used and the management of that structure determines the losses of dry matter which may occur. The graph shown gives some idea of how losses, both storage and field loss, are related to moisture content. Field losses are high at the low moisture end, due to leaf shatter and wind, while storage losses are high at the high moisture end due to excessive seepage.

Another chart shows the percent dry matter losses for various types of silos and moisture contents. The information is condensed mostly from a symposium reported on by C. H. Gordon of the U.S.D.A., in the Journal of Dairy Science. It represents the collective experience of researchers in North America over the last 15 years. Gordon noted that at high moisture contents the high losses are not characteristic of any one silo type but rather are due to excessive seepage and fermentation. Below about 70 per cent moisture the losses are more due to mouldy or rotted material which results from silo air leaks, or air pockets which were not squeezed out after ensiling. It must be kept in mind that the major purpose of a silo is to exclude oxygen from the silage; its use as a container for the crop is secondary.

Bunker or trench silos generally have higher losses than tower silos because of the greater surface area of silage which may be exposed to air. "Clamp" silos, used extensively in Britain and to some extent in New Zealand, consist of silage stacks with ramped ends. They have a plastic sheet underneath and another on top with the two being sealed around the edges. A small vacuum pump is then attached and the silo is evacuated to less than 15 inches of mercury. One American experiment with this silo resulted in 8 per cent total loss for corn and grass silage. However, this type of silo has a high labour requirement, since the silo must be resealed every time it is opened, and it also suffers from difficulties in keeping the plastic intact.

High quality silage can be produced in almost any type of silo. However, the amount of careful management required to make good silage varies greatly from one type of silo to another. Gastight, glass-lined silos require only the closing of a door to attain a very adequate seal. On the other hand, structures such as bunkers or stacks require a great deal of proficiency in order to arrange, pack and seal the silage in a satisfactory manner. Large open type silos are much more subject to the problems of intermittent filling than are smaller or more easily sealed silos.



# storage



Photo by Brian Smith

Some general guidelines which are appropriate for almost any crop and silo type are: 1) Choose your harvest time on the basis of crop nutrient content, 2) fill the silo rapidly and with as few interruptions as possible (try to fill it within three or four days for a 300-ton silo). Slow filling encourages prolonged respiration and the development of heat. This problem is more acute with trench or bunker silos than with towers, 3) chop the crop as fine as possible to ensure a tighter pack, 4) try to keep the moisture content of the newly-harvested crop

below 70 per cent. Above that, consider addition of chemical preservative or mix thoroughly some dry material such as hay with it, 5) seal the silo quickly and thoroughly after filling, 6) in the case of bunker or trench silos, the silage must be well-packed by rolling with a tractor or other vehicle after each wagon is unloaded.

**What About Cost?** The following table gives the results of a recent study by Professor J. A. Choiniere of Laval University. He studied actual installations of five types of tower silos; concrete stave, monolithic or continuous poured concrete, galvanized steel, wood stave (traditional method), and wood stave (improved method). The improved method of construction for wood stave silos consists of the use of steel dowels to join adjacent staves. It is seen that, although wood stave towers have



### Left

The two concrete stave silos (one 20' x 60', the other 24' x 60') on the Macdonald College Farm are used in feeding the dairy herd. Each year the silos are filled alternately with haylage and corn silage.

### Below

This Tilt-Up Concrete Bunker Silo on the Macdonald College Farm is 27-ft. wide by 108-ft. long. Total depth of silage is about 10 feet with haylage on the bottom 1/3 and corn silage on the top 2/3. Old hay is chopped and placed on top as cover material.

the cheapest initial cost, the monolithic concrete silo has the least annual cost, due principally to its very low maintenance requirements. The all-concrete silo does not require any interior coating, while all the others do and usually require renewal of the coating periodically.

C. R. Hoglund in Michigan found that, although gas-tight silos had storage losses 10 percentage points lower than monolithic concrete silos, the concrete towers had lower annual costs.

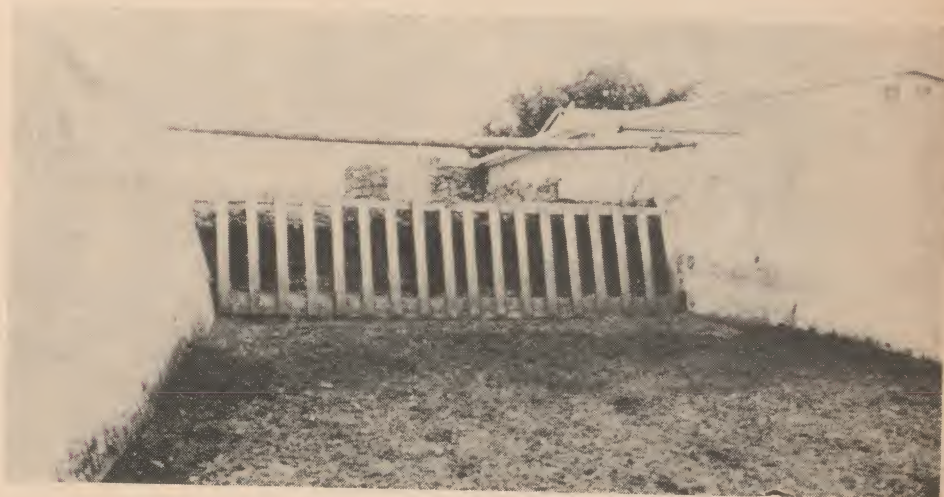


Photo by David Fisk

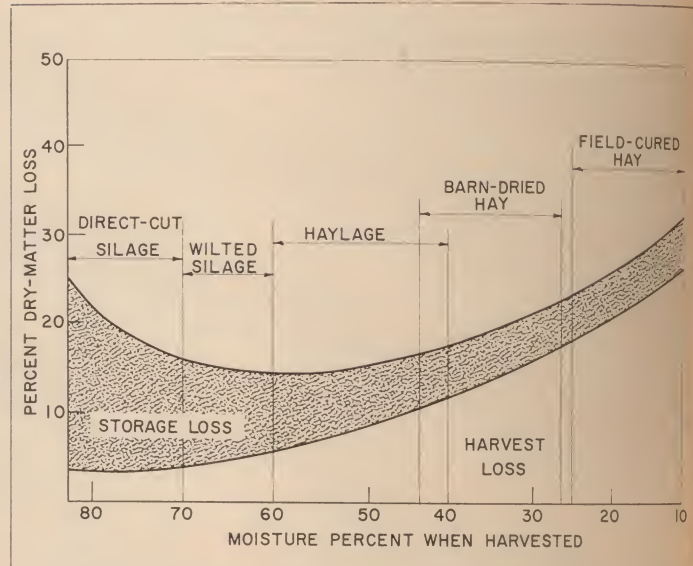
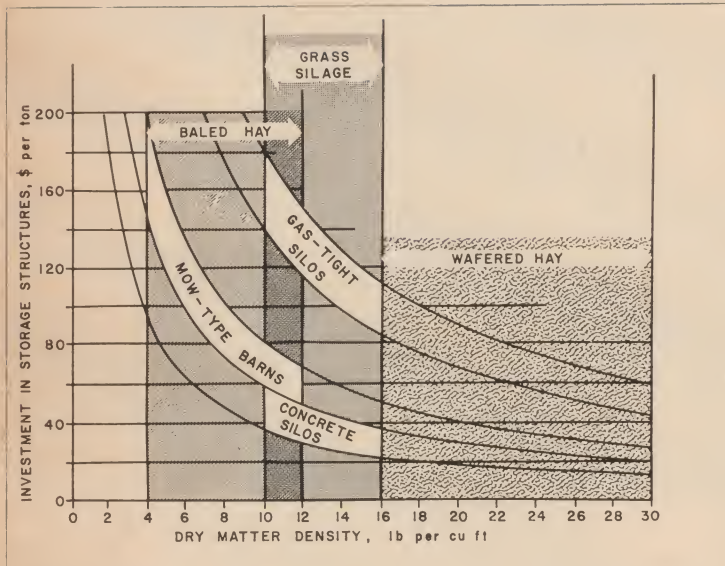
Initial costs and annual costs for the 4 different types of silos surveyed and six different sizes (Silage distributor and unloader excluded) (1968)\*

Size of Silo & Capacity	Type of Silo	Approximate Duration (years)	Initial Cost		Annual Cost % of initial cost	(silage losses excluded)		Average silage losses %	Annual cost per ton, including silage losses
			Total	Per ton		Total	Per ton		
A 14' x 30' (96 tons)	Concrete staves	30	2,208.	23.00	7.59	168.	1.75	14	
	Monolithic concrete	35	1,950.	20.15	5.88	114.	1.19	14	\$2.73
	Galvanized steel	30	3,050.	31.80	7.20	220.	2.29	12	2.17
	Wood staves, Trad. Meth.	25	1,580.	17.35	10.47	165.	1.72	14	3.13
	Wood staves, Impr. Meth.	25	2,080.	22.85	7.79	162.	1.69	14	2.70
								14	2.67
B 16' x 40' (189 tons)	Concrete staves	30	3,172.	16.80	7.34	232.	1.23	14	
	Monolithic concrete	35	3,000.	15.90	5.88	176.	0.93	14	\$2.21
	Galvanized steel	30	4,050.	21.40	7.14	289.	1.53	12	1.91
	Wood staves, Trad. Meth.	25	2,315.	12.35	10.29	239.	1.27	14	2.37
	Wood staves, Impr. Meth.	25	3,300.	17.45	7.63	252.	1.33	14	2.25
								14	2.31
C 20' x 40' (295 tons)	Concrete staves	30	4,135.	14.00	7.17	296.	1.00	14	
	Monolithic concrete	35	3,800.	12.90	5.88	223.	0.71	14	\$1.98
	Galvanized steel	30	5,780.	19.60	6.99	405.	1.37	12	1.69
	Wood staves, Trad. Meth.	25	2,855.	9.70	10.26	292.	0.99	14	2.21
	Wood staves, Impr. Meth.	25	4,270.	14.45	7.58	324.	1.10	14	1.97
								14	2.08
D 18' x 50' (330 tons)	Concrete staves	30	4,503.	13.65	7.12	320.	0.97	14	
	Monolithic concrete	35	4,250.	12.90	5.88	250.	0.71	14	\$1.95
	Galvanized steel	30	6,300.	19.10	6.98	440.	1.33	12	1.69
	Wood staves, Trad. Meth.	25	—	—	—	—	—	14	2.17
	Wood staves, Impr. Meth.	25	4,520.	13.70	7.56	342.	1.04	14	—
								14	2.02
E 20' x 50' (407 tons)	Concrete staves	30	5,092.	12.50	7.06	306.	0.89	14	
	Monolithic concrete	35	4,750.	11.70	5.88	280.	0.69	14	\$1.87
	Galvanized steel	30	7,300.	17.95	6.97	509.	1.25	12	1.67
	Wood staves, Trad. Meth.	25	—	—	—	—	—	14	2.09
	Wood staves, Impr. Meth.	25	5,080.	12.50	7.56	385.	0.95	14	—
								14	1.93
F 20' x 60' (529 tons)	Concrete staves	30	6,181.	11.70	6.97	431.	0.82	14	
	Monolithic concrete	35	5,700.	10.80	5.88	336.	0.64	14	\$1.80
	Galvanized steel	30	9,000.	17.00	6.90	621.	1.17	12	1.62
	Wood staves, Trad. Meth.	25	—	—	—	—	—	14	2.01
	Wood staves, Impr. Meth.	25	5,820.	11.00	7.56	440.	0.83	14	—
								14	1.81

\*The initial costs include the cost of the silos installed, including their foundation and their roof, but excluding the silage distributor and the unloader.

# Below

The influence of hay crop moisture at harvesting on dry-matter losses.  
(Mich. State Univ. Agr. Econ. Bul. 947)



## Percent Loss of Dry Matter (Various Research Reports)

Silo Type	High Moisture 70% Up / Remarks	Medium Moisture 50 - 70% / Remarks	Low Moisture 50% or less / Remarks
Gas-Tight Tower	16% Grass/Alfalfa @ 80% mc. 8% " @ 70% mc.	4-12% 6% Sudangrass 5% Grass/Alfalfa at 60% mc.	5% or less 3.4% Alfalfa at 50% mc. 0.5 — 6.2% Red Clover & Timothy
Concrete Stave Steel or Wood Towers with Top Seal	23-24% Alfalfa 18-29% Red Clover 20-30% Direct cut @ 80% mc. (mostly seepage) 19% Grass/Alfalfa @ 80% mc. 14% " Alfalfa @ 70% mc.	7-8% 12% Grass/Alfalfa at 60% mc.	9% Alfalfa in Concrete Stave, 48% m.c. 4.2% " @ 42% mc. 11% Grass/Alfalfa @ 40-50% mc.
Concrete Stave Steel or Wood Towers without Top Seal		8-12%	12% 25% Legume at 50% mc. 44% (one case reported)
Vacuum Sealed 'Clamp' Silo		8% Corn & Grass 14% Flail chopped Ryegrass*	
Trench or Bunker Silo with Cover	10-20% Grass @ 70% mc.	13% Grass at 68% mc. 28% Orchard grass (due to filling delay & broken cover) 20% Flail chopped Ryegrass*	
Trench or Bunker Silo Uncovered		30-50% 70% (one case reported)	
Stack or 'Clamp' Silo Non vacuum Plastic Covered		23% Flail chopped Ryegrass*	

\*Recent New Zealand Experiment.



A Virginia study reported in the Illinois Forage Handbook in 1964, found that it normally pays to use self-feeding bunker or trench silos rather than hand feeding from towers, when feeding up to 300 tons per year. They found that at 300 - 450 tons per year, the economical silage storing and feeding system is either a self-feeding trench or bunker or a tower with mechanical unloader and conveyor. For more than 450 tons/year the fully-mechanized tower was the most economical.

The break-even point in tonnage at which a fully equipped tower costs less per ton than a self-feeding bunker depends largely on labour costs and the amount of feed waste associated with self-feeding.

In the same reference a 1958 Michigan study was reported which broke down typical costs for two 800-ton wood bunker silos, concrete stave towers and gas-tight towers. The most obvious result was that even though the bunker's initial cost was far below that of the two types of towers, it had the highest annual cost. A chart is shown giving the breakdown of costs.\*

C. R. Hoglund in Michigan reported that the tonnage break-even point between towers and bunkers was around 1,000 tons. Above 2,000 tons costs became increasingly lower for bunker silos.

A summary of storage costs for forage in its many forms is presented in graph form. It is based on Ontario prices in 1964 and shows the relationship of cost per ton of dry matter stored with dry matter density. Very simply it says that the more crop one can put in a given space within a storage structure the lower will be the storage costs per ton of material stored.

Bruce Narsted,  
Graduate Assistant,  
Department of Agricultural  
Engineering.

Item	Wood bunker silo 6' X 30' X 130'	Concrete- stave tower silo 20' X 55'	Gas-tight tower silo 20' X 50'
Number of silos.....	2	2	2
Tons silage capacity <sup>a</sup> .....	800	800	800
Tons silage harvested <sup>b</sup> .....	1,290	1,210	1,170
Investment			
Silo.....	\$ 3,400	\$ 7,200	\$20,600
Concrete slab.....	4,200	2,200	2,200
Silo unloader.....		1,400	
Mechanical feeder.....		1,500	1,500
Feeding gate and bunk.....	400		
Filling equipment.....	2,500	2,900	2,900
Total investment.....	\$10,500	\$15,200	\$27,200
Annual costs			
Silo.....	\$ 476	\$ 360	\$ 984
Concrete slab.....	252	132	132
Silo unloader.....		210	
Mechanical feeder.....		225	225
Feeding gate.....	40		
Filling equipment.....	425	493	493
Plastic cover.....	480	50	
Interest on additional inv.....	315	456	816
Extra feed bought.....	804	265	
Total annual costs.....	\$ 2,792	\$ 2,191	\$ 2,650

<sup>a</sup> Net tons preserved for feeding.

<sup>b</sup> Based on grazing cows for a 40-day period in early spring when silos are filled, and feeding out of storage the rest of the year. Corn silage would refill silos in fall.

Reprinted from Mich. State Univ. Quart. Bul., Vol. 41, No. 2, Nov., 1958.

\*See Page 10, Illinois Forage Handbook Circular 895.



# more FOR YOUR

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## \$

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Savings can be made on the weekly food bill and still give the family appetizing, nutritious meals. Admittedly this takes careful planning, time and ingenuity, but the effect on the budget is well worth the effort. The saving may not seem spectacular at the time, but multiplied by the number of weekly shopping trips in the year the figure can be substantial. It's the few cents saved here and there that make the difference. Where are those hidden pennies found? Here are a few suggestions:

**Plan:** A sound approach to the problem is to start by deciding on a basic food pattern which includes the nutrients required by the family. \*Canada's Food Guide lists the foods that should be on the weekly menu to assure the required nutrients are provided. Using this pattern, a menu for the week can be planned. This will then serve as a shopping guide, but should be flexible in order to take advantage of special buys and leftovers of equivalent foods. Approaching the supermarket with a shopping list may aid in resisting purchase of luxury items and also help to prevent buying greater quantities of food than required.

**Label:** Valuable information may be had concerning the product by carefully reading the label. This can serve as a means of judging the worth of the product as well as its suitability for your intended purpose. The Food and Drug Regulations require that the label must carry such information as: the brand name; the common name of the food; the form, e.g. diced, sliced, whole, etc.; the state or method of processing, e.g.,

baked, dehydrated, powdered, etc.; the origin, e.g. beef, pork, chicken; the net contents and the name and address of the manufacturer.

In the case of some products a list of the ingredients must be declared on the label in descending order of their proportion in the product. This does not tell you the actual amount of each ingredient, but by comparing its position on the list with that of the other ingredients you get a fair idea.

For example in a frozen turkey pie the most valued and desirable ingredient is turkey. A comparison of the value of the following four turkey pies by judging the amount of turkey in relation to the other ingredients and the price is very revealing. Product No. 1: 8 oz. net weight, price 31 cents. Ingredients: a gravy consisting of turkey broth, wheat flour, turkey skin, turkey fat, cornstarch, vegetable oil, seasonings, turkey meat, etc. Product No. 2: 8 oz. net weight, price 29 cents. Ingredients: turkey, potatoes, carrots, peas, gravy made from turkey stock, etc. Product No. 3: 16 oz. net weight, price 67 cents. Ingredients: turkey, turkey broth, potatoes, carrots, peas, etc. Product No. 4: 8 oz. net weight, price 3/79 cents (27 cents each). Ingredients: turkey broth, water, turkey meat, peas, carrots, turkey skin, etc.

**Size:** Many items are packaged in a variety of sizes. The cost per unit of contents is usually less in the larger size. Provided this is a product you can use before it deteriorates and you have sufficient storage space, the larger size is obviously the best buy even though the initial expenditure appears high.

**Name Brands:** Widely advertised national brands are usually more expensive than store brands. Because chain stores have products packed especially for them and purchase in huge quantity, the selling price of store brands can be lower. The quality of most store brands is comparable to name brands and the nutritive value usually equal. However, some store brands are inferior and it may take a little shopping around to find the ones you like.

**Form:** The price of a product is affected by the amount of work or processing that has been done on it by the manufacturer. Consider, for instance, the choices of rice. In one supermarket the prices, based on two pounds were: pre-cooked or instant \$1.36; converted 80 cents; regular long grain 43 cents; short grain 32 cents. The processed rice usually has additional nutrients, but most of the increased price you are paying is for the convenience it affords.

An example of this found at the meat counter is whole chicken versus cut-up. A whole chicken costs less than the cut-up one. You are paying the butcher to do the cutting. A little do-it-yourself can pay off.

However, use of instant coffee as opposed to regular can effect a saving. Also, concentrated frozen orange juice in place of ready squeezed or juice from fresh oranges is less expensive.

\*Available from Ministère de la Santé, Quebec, P.Q.



**Meat:** A crafty means of getting a choice cut from a less expensive piece of meat is by purchasing a blade chuck roast. This roast has one tender muscle which is the one also found in the very desirable rib roast. True, by the time this muscle gets to the chuck it is not large but it is tender. This muscle can be cut from the roast and used as steak. A second meal can be had from the remainder as a rolled pot roast or cubed for a beef stew or ground for hamburger.

**Meat Substitutes:** Supplying the protein in the diet by means of meat, poultry or fish is costly. This nutrient can be had at less cost by using eggs, cheese, milk and to some extent by legumes. Combined with other foods in casserole dishes they add not only protein and other nutrients, but also variety to the diet.

**Cost Cutters and Specials:** Savings on specials are often large as supermarkets will sometimes offer items at near wholesale price to keep regular customers and attract new ones. It is not always possible to know for sure how much the price has been cut unless you have a good memory or keep cost records. However, a comparison of this price with that of comparable items on the shelves may serve as a guide. If this is on a non-perishable item that you regularly use and have space to store it is wise to stock up and take advantage of the saving. The specials on meat are often very substantial savings and with a freezer can be stashed away for future use. Resist buying just for the sake of getting a bargain as it could turn out to be something you would not use and do not need.

**Fruits and Vegetables:** A comparison of price of fresh, frozen or canned fruits and vegetables often reveals an opportunity to save. However, remember to allow for the waste in preparation of fresh products as well as the spoilage usually encountered.

**Milk:** Use of fortified skim milk in place of whole milk gives a saving and is nutritionally sound. The fat that has been removed is usually adequately supplied by other foods in the diet. Also serving a half-and-half blend of whole milk and reconstituted non-fat dry milk saves pennies. Non-fat dry milk can also be used successfully in cooking.

Purchasing whole milk in the three-quart bag or the half gallon carton as opposed to the one-quart carton gives a saving of about one cent a quart. If you purchase several quarts a day the yearly saving is worth considering. Use of 2% or skim milk gives a saving of two cents a quart.

**Margarine:** May be used in place of butter in the diet and makes a saving of around 20 cents per pound.

**Eggs:** Judging the best buy in eggs in the various prices and sizes can be a puzzle. It has been estimated that you get more egg for your money if you buy medium size any time the difference in price between large and medium is eight cents or more per dozen.

**Consumer Calculator:** The varied and involved methods of pricing used by the merchants give rise

to problems in mental arithmetic that the average consumer has neither the time nor the patience to solve. Price comparison of items thus becomes a frustration. The Canada Department of Agriculture has come to the rescue with the \*Consumer Calculator. This can be conveniently carried in your purse and by a flick of the disc the answer comes into view.

**Shop Around:** The price of the identical item is sometimes different in various stores. It pays to take time once in a while to do some comparative shopping.

It has been said that better shopping takes 30 minutes more a week. Also that on an average shopping bill of \$27. the better shopper easily saves 15 per cent. That is \$4. in 30 minutes. You could say that as a better shopper she earns \$8. an hour.

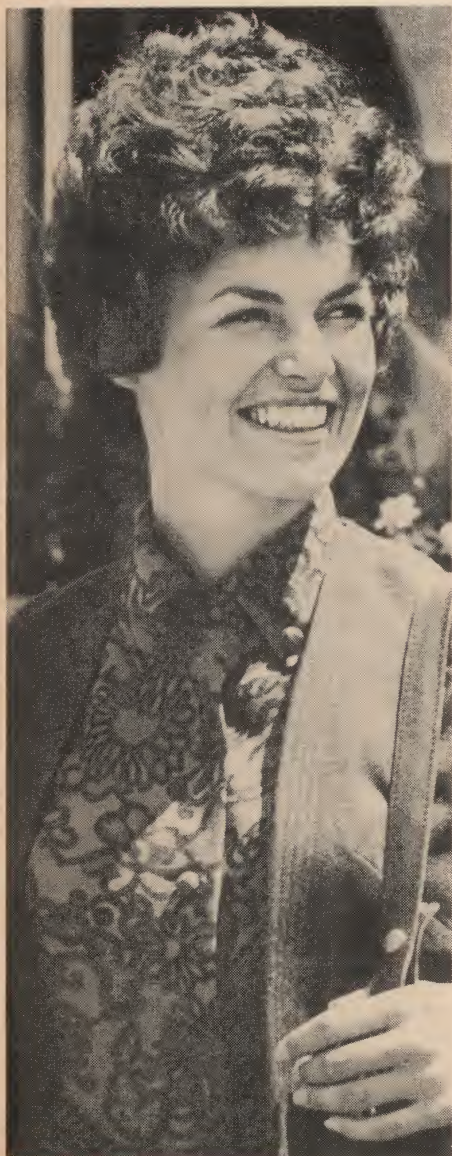
C. L. Fergusson,  
Assistant Professor,  
School of Food Science.



\*Available from the Queen's Printer, Ottawa or Queen's Printer Book Shop, 1182 St. Catherine St. W., Montreal. Price: 75 cents.



# Macdonald Reports



## New Zealand Ranch Queen Visits Macdonald

It was a pleasure for staff and students of Macdonald to host, on July 21, New Zealand's Ranch Queen for 1970. Miss Helena Wren was guest of honour at a luncheon at the Chalet Pruche in the Morgan Arboretum and toured the campus as well as the College Farm during her day's visit.

Miss Wren, a most charming and attractive 22-year-old school teacher, was on a goodwill tour of Canada and other countries to make her country better known. She left home in mid June and visited the Fiji Islands, Hawaii, Vancouver, Amsterdam, London, Quebec City, Montreal, Ottawa, Toronto, Edmonton, Calgary, Banff, and again Vancouver, before leaving Canada August 5. In all, she spent about three and a half weeks in Canada.

Helena was crowned Ranch Queen at the ball which was the climax to the Land and Industry Exhibition sponsored by the Royal New Zealand Agricultural Society. She won her title and her trip in a country-wide competition in which contestants were judged for personality, intellect, public speaking ability, poise and appearance. It seems that her title is as sought after as the "Miss New Zealand" title.

Helena teaches junior high school in the town of Nelson, which is in the northern part of South Island. She enjoys sports of all kinds and really enticed some of us here at Macdonald with her descriptions of water-skiing, snow-skiing, mountain climbing, swimming and so on.

Apparently, the area around her home is famous for its beaches, ranching, and farming. And the climate is really inviting!

In speaking about agriculture, Helena said that there were three main types of farming — sheep, beef, and dairy. Agriculture is by far the largest industry in New Zealand; it seems that the country is totally dependent on its agricultural exports. Farms in that country range in size from 100 to 750 acres, so it sounds as if farming is as diversified there as here.

The cost of living in New Zealand is much lower than it is in Canada for similar standards but in keeping with this, annual incomes are much lower, too. However, some of our prices really shocked Helena and she was quite unfamiliar with the business of tipping, much to our amusement!

I was quite envious of Helena's most extensive wardrobe — all wool, too. Her clothes were the gift of the New Zealand Wool Board and were simply beautiful. Even in the humid heat that we were experiencing in Quebec, she said she was most comfortable because the clothes were of such a fine and light-weight wool.

As souvenirs of New Zealand, Helena gave us all "kiwi" pins and tikis. "Kiwis" are the famous non-flying birds of New Zealand, and this word is also used as nickname for New Zealanders. Tikis are grotesque figures used by the Maori, the native peoples of New Zealand, as good luck charms.



New Zealand was made more real to many Quebecers through the visit of their charming Queen. It was fun to hear about their way of living and to learn something of their country, and I am sure Helena must have returned with a greater understanding of Canadians. Tours such as this one can only lead to better international living through improved understanding amongst the people of the world.

Colleen Coates

#### Oslo 70

Eight students from Macdonald College and one from Laval left Dorval on Saturday, July 18, for Oslo, Norway, to work for a six-week period at Alcan's Oslo plant. This novel approach to summer employment has the added bonus of giving students the chance to visit another country and participate in a form of cultural

exchange. Due to the cultural aspects of the trip, the Secretary of State's office is subsidizing the return air fare. It is a tribute to the students' spirit of adventure that they are willing to spend their earnings in advance to have the opportunity of working in Norway. Students will have a two-week initiation period and expect to net \$64 per week after paying room and board, insurance, etc.

The opportunity for the students developed from a visit of a senior Alcan officer to the Oslo plant this spring. Apparently, the Manager of the Oslo plant was having difficulty replacing employees on summer vacation. It was suggested to him that Canadian University students had problems getting summer employment and that the possibility of trying some Canadian students might be explored.

Intensive work on the project started when the formal request for students came from the Alcan Oslo plant. Due to the short time available to complete arrangements, the Canada Manpower office at Macdonald College was contacted. The Macdonald office had the advantage of being in close contact with many students who live locally and Alcan had experience in dealing with Mr. Henderson and Mr. Daoust of the Manpower office in the past. The minimum time was taken in arranging interviews, work permits, transport, etc. These efforts paid off and the students are, we hope, the first of many to have this kind of opportunity.

The Macdonald students participating in the program are: Peter Curry, Allen Weigensberg, Robert Dalton, Edgar Honer, John Klinck, Charles Katz, Stacey Bindman, James Dyer, and the Laval student is Bruno Dufour.





# The Family

# Farm

Published in the interests  
of the farmers of the province  
by the Quebec Department of  
Agriculture and Colonization

## A Busy Year at The Manicouagan Elite Seed Potato Station

In spite of a very poor growing season, the Manicouagan Elite Seed Potato station continued its pioneering work in 1969 and had another busy year.

Activities at the station, which was founded in 1961 and now covers 1,600 acres (500 under cultivation), included growing 60 acres of potatoes, clearing and breaking another 12 acres, digging 13,000 plants by hand; sorting and shipping 9,500 bags of seed potatoes; starting plants from about 36,000 potato eyes in the greenhouse to detect virus diseases; taking, staining, and microscopically examining over 20,800 sliced tuber imprints to detect bacterial ring rot; growing thousands of plants in Florida during the winter to ensure that seed potato stocks are free from virus diseases.

In their annual report, the station's staff say the bad weather made 1969 one of the worst growing seasons for several years. It was late in warming up in the spring and, therefore, the soil stayed cold and planting was delayed till the beginning of June. Besides getting off to a late start, the plants were held back by lack of moisture in the ground.

Notwithstanding these difficulties the station clung to its objectives in view of the ever-increasing demand for Elite seed potato stocks, and increased its potato acreage to 60 (from 50 acres in 1963).

The popularity of the Kennebec variety with growers was reflected in a doubling of the area devoted to it at the station (22.8 acres in 1969 compared to 11.7 in 1968). Plantings of Green Mountain and Katahdin, which, with Kennebec, account for 86 per cent of the station's potato acreage, were somewhat reduced. The acreage of Keswick rose from 1.3 in 1968 to 3.65 in 1969 and that of Norland from 0.75 to 1.45. In addition, Sebago, Red Pontiac and Netted Gem were added to the program.

The plants were hilled up at the end of July, top-killing started on September 11, and digging began on August 26 and finished on October 20.

Owing to the late spring and a slight shortage of rain at the end of August, yields were smaller than in 1968. On the other hand, there were a lot of medium-sized tubers, which are ideal for seed. Late blight was completely absent but traces of rhizoctonia were found, mostly on Katahdin.

Kennebec gave the best yield at 385 bushels to the acre. The average yield of all varieties was 300 bushels to the acre, compared to 430 in 1968.

## Cost of Shipping Milk in Cans Increased for Some Dairy Farmers

The Quebec Agricultural Marketing Board has ruled that the maximum price which certain Quebec factories may charge farmers for transporting their milk to the factory in cans will now be 30 cents a hundred pounds instead of 25 cents. The board's decision became effective on June 15 and will remain so until February 28, 1971.

The factories in question are as follows: La Cr  merie Bouchard, Granby; Saint-Guillaume (Yamaska) Agricultural Cooperative Society; J.-A. Baribeau Dairy Products Ltd., St-Maurice (Champlain); La Cr  merie St-Boniface (St-Maurice); Pelletier Dairy Products Inc.; St-Edouard Dairy Products Ltd; South Durham Creamery Inc.; St-Germain Agricultural Cooperative Society; Dalp   & Fr  res Ltd.; Papineau Regional Cooperative; South Shore Agricultural Cooperative Society; Bas St-Laurent (Lower St. Lawrence) Agricultural Cooperative; Southern Quebec milk cooperative; Shefford Dairy Ltd., Lawrenceville; Val-Maska Dairy Products Inc., St-Damase; Casavant Creamery Ltd., St-C  saire; Granby agricultural cooperative and its various subsidiaries; Vermette & Fils Lt  e, St-Agapit, Danville and St-Fr  d  ric; Gr  goire Creamery Inc., St-Malachie; O. Couture & Fils, La Durantaye.

Sitting by authority of the Dairy Products and Dairy Products Substitutes Act, the Board reached its decision after taking into



consideration that the balance sheets produced by the factories showed that, in general, it was costing them more to transport the milk than the farmers were paying.

The board also took into account that the cost of transporting milk in cans has risen in recent years owing to the increased cost of living and because more and more farmers are installing equipment so that their milk can be collected by bulk milk tank truck instead of in cans

The Quebec industrial milk producers' federation, on the other hand, maintained that the higher transportation charge requested might be unjustified in some cases and that, in any case, increased transportation costs ought to be made up for by rationalization and improved planning of milk collection rounds. The board agreed that such rationalization appeared to be necessary but said that this could not be done immediately nor without prior negotiations between the parties chiefly concerned and that, during the necessary transition period and until an agreement had been reached between the transporters and the producers' representatives, it was necessary to make temporary provision.

The Board had carried out a comparative study of milk transport conditions in Quebec and in Ontario — where the percentage of milked transported in bulk is still lower than it is in Quebec and milk collection rounds are already being rationalized but where, nevertheless, dairy farmers have had to face higher prices for transport of milk in cans than in bulk.

### **New Biological Council Head**

Dr. E. J. LeRoux, 48, assistant director-general (Institutes) of the Canada Department of Agriculture's Research Branch, has been named president of the four-year-old Biological Council of Canada. Dr. LeRoux was elected to this post at the council's annual meeting.

Dr. LeRoux is internationally known for his outstanding research on insect population dynamics. His best-known work involved long-term fundamental studies of population dynamics of apple pests, carried out in Quebec orchards.

Born in Ottawa on January 24, 1922, Dr. LeRoux attended both primary and secondary schools here. After serving in the Royal Canadian Navy from 1941 to 1946, he obtained his B.A. from Carleton University in 1950. In 1952 he obtained his M.Sc. in entomology and in 1954 his Ph.D. in entomology, both from McGill University. Dr. LeRoux joined CDA as an assistant entomologist, rising to the rank of senior entomologist by 1962. Most of his work was at St. Jean, Que., but he also did research in the Arctic and southwestern Ontario. He was the first Canadian to study population dynamics of insects affecting agricultural production, applying new methods of study he was developing with co-workers in the Department of Forestry.

He joined the staff of the Department of Entomology at McGill University in 1962, continuing his research on population dynamics of forest and crop pests until December, 1965, when he

rejoined the CDA Research Branch as co-ordinator of entomological research. In 1968 he was appointed to his present position.

Besides serving as president of the Biological Council of Canada, Dr. LeRoux is also president of the Entomological Society of Canada and a director of the Canadian Society of Zoologists. He served as president of the Entomological Society of Quebec and as director of the Quebec Society for Protection of Plants.

Dr. LeRoux is a member of the panel of experts on Integrated Pest Control for the Food and Agriculture Organization of the United Nations, official correspondent in entomology for the Commonwealth Institute of Biological Control and Canadian representative for Plant Protection on the International Society for Horticulture Science.

### **Elects Regional Vice-President**

Mr. John J. Hogan, head of the Farm Buildings section of the Quebec department of Agriculture and Colonization's Farm Improvement division, has been elected regional vice-president of the Canadian Agricultural Engineering society.

This is the first time a professional employee of the department has been appointed to the society's board of directors. The society, of which Mr. Hogan has been a member since 1965, was founded about 12 years ago. It seeks to facilitate meetings and professional exchanges between Canadian agricultural engineers.



The daughter of Mr. Jean-Paul Robert  
in her father's sugar beet field at  
St. Césaire in Rouville County.



#### **Sugar Beet Crop Expected to be 150,000 Tons**

The Quebec minister of Agriculture and Colonization, Mr. Normand Toupin, expects that the province's sugar beet crop will be about 150,000 tons this year. The acreage is estimated

at 9,400, or 400 acres less than last year; at 800, the number of growers is also slightly smaller. The counties of St-Hyacinthe and Bagot are expected to produce around three quarters of the crop; the rest will come from 15 other counties.

Milling of the 1970 crop should begin toward the end of September and preparations for the season's work at the Quebec refinery at St-Hilaire are well under way.



## Easy to Spread

One of the big selling points about the latest types of margarines is that they are soft and easy to spread, even straight from the fridge. Now, following work by Australian scientists, it looks as though just the same properties can be built into butter.

In fact, most of the fats found in grass and in many livestock feeds are polyunsaturated (or soft). But bacteria in the rumen change these soft fats into hard fats, which is why most of the fats in the meat or milk of ruminant animals are of the hard type.

The new technique is to feed the animal a supplement which consists of minute globules of vegetable oil protected by a surface coating from the bacterial action of the rumen. The effect has been striking, and proportions of up to 30 to 40 per cent of soft fats have been obtained in milk fat compared with the normal two to four per cent. The process has also produced softer fat in lamb and mutton.

The researchers predict that the dairy and meat industries should eventually be able to offer a wide range of products with varying levels of soft and hard fats. This could be extremely valuable in view of the current interest in lowering blood cholesterol levels in relation to heart disease.

(From "The Farmer and Stock-breeder", March 3, 1970.)

## Aid for the Use of Marl

The Minister of Agriculture and Colonization offers farmers a grant for the transport of marl.

The marl must: a) contain at least 75 per cent of calcium carbonate; b) come from the deposit nearest to the farm unless it can be shown that this source is exhausted or that the material obtained from it is too wet; c) be dumped on the field in piles, each containing one load. In order to permit claims to be verified, the piles must not be spread until a representative of the local agricultural office has visited the field to check them.

The rate of application must not exceed 10 cubic yards to the acre, up to a limit of 20 acres a year.

The Department of Agriculture and Colonization will pay the trucker, from the deposit to the farm, a grant of 20 cents per cubic yard for each of the first two miles, and 5 cents per cubic yard for each of the following 18 miles.

The grant may not exceed \$13 an acre nor a maximum of \$260 per farm a year.

Every farmer wishing to take advantage of this soil treatment must comply with the following rules: a) sign a user's permit at the local agricultural office authorizing him to transport the recommended quantity of marl; b) the original of this permit must be given to the trucker; c) any farmer who has already obtained marl but has not spread it is ineligible for the permit he is applying for.

If the marl is not used for agricultural purposes, the Department of Agriculture and Colonization reserves the right to demand restitution of the amount paid for its transport.

Truckers wishing to transport marl must apply to the Lime division of the Farm Improvement Service at Quebec for a transport permit and be prepared to supply the following details: Year, make, serial number and licence number of the truck, the dimensions of the body or box which is an integral part of it, and a certificate of weight from a public weigh scale.

The trucker must also obtain from the farmer his user's permit, signed by a technical official of the Department, before undertaking any transportation.

The bill for delivery made out to the farmer must bear: a) the farmer's name and address; b) the name of the lake from which the marl came; c) the number of cubic yards transported; d) the farmer's signature.

Claims must be submitted through the local office on the form used in the case of grants paid for the transport of agricultural limestone.

Payment of the transportation grant is not transferable to farmers or financial organizations.

The conditions of this assistance policy also apply to farmers and truckers obtaining the residues available at the Department's beet sugar refinery at St-Hilaire.

These rules supersede the preceding ones and will remain in force until further notice.





## Brome

Austin: A well-attended meeting was held at a member's summer cottage at Orford Lake. Held a discussion regarding garden party and prizes were displayed. South Bolton: Entertained Sutton branch. Saw a display of antiques. Contributed articles for ditty bags. Roll call was a penny for size of shoe.

## Compton

Brookbury: Made plans for their Anniversary Party. Bury: Mrs. Glen Olson gave an informative talk on the post office. Membership in the United Nation's Association was renewed. A Life Membership was given to former secretary, Mrs. Gerald Pehlemann. Welfare and Health Convener handed out pamphlets on floridation. Home Economics Convener demonstrated decorating a nylon scarf using felt pens. Canterbury: Held a discussion on litter and garbage areas along roads, also outsiders starting dumps in rural areas. Motion sent to Town Council and to Member of Parliament, Mr. Dionne, re these matters. East Angus: Roll call was name a Women's Institute branch outside of Compton County. Mrs. S. Clout spoke on a home for students coming from Labrador region to attend the Galt Regional School next term. Several members have volunteered to take children from Labrador for the school year. Mrs. V. Bernard reported on consumers meeting she attended in Sherbrooke and reported on several resolutions that were made. Miss D. Shattuck spoke on the history of Compton. She has checked the history of the W.I., old schools, churches and other historical events. Held a birthday party for a charter member.

Scotstown: Sent two linen handkerchiefs with lace trim to the FWIC sales table. Members and friends furnished refreshments for the Brownie and Guide Tea.

## Compton Donations

Brookbury: Gave \$10 to Save the Children Fund. Donated \$11 towards prizes at Pope Memorial School, Bury, Que. Bury: Voted \$5 to clean school after Antique Show and \$5 to help clean Compton County Museum. Voted \$5 to help buy pins for children leaving Pope Memorial School to go to the Regional and \$20 voted to buy articles to fill ditty bags. Canterbury: Donated \$10 to Sherbrooke Hospital. East Angus: Thirty-six dollars talent money handed in. Each member raised \$2 in any way she wanted to. Scotstown: Donated money to Sherbrooke Hospital, \$10 given for public speaking prizes, \$5 given for school pins at Pope Memorial School in Bury.

## Compton Projects

Brookbury packed 10 ditty bags. Canterbury packed six and East Angus packed 18.

## Montcalm

Rawdon: Mrs. A. Asbil spoke on pollution and simple effective ways to fight its increase. August tea and sale planned and conveners chosen. Ditty bags packed. All members attended a trip to Mr. and Mrs. E. T. Moore's Canadian Village.

## Richmond

Cleveland: Entertained Melbourne Ridge and other guests with a social afternoon of bingo and games. One new member welcomed. Received a donation of a quilt to be used for raising

funds. A donation was given to the C.S.C.F. Denison Mills: Roll call was name a Canadian well known in agriculture. Held a sale of slips, flowers, and bulbs. Mystery parcel was won by Mrs. Stevens. Proceeds for the Sunshine Fund. Richmond Hill: Held a contest on hand worked button holes. Two quilts ready to be tacked. Ten ditty bags filled. Collected cotton for cancer patients. Two members donated to funds. Richmond Young Women: Roll call was Pennies for Friendship and a penny for each inch of the length of each member's arm. Item read on dwarf-type dahlias being splendid for borders and cut flowers. Donations given to Upper Melbourne Youth Centre and March of Dimes. Eight ditty bags were packed. Shipton: Held an auction of discards between members. The sum of \$6 was realized. Contest was held on naming the leaves of different fruit trees.

## Sherbrooke

Ascot: Mrs. Malcolm Hughes spoke on experiences in Malaysia where she and her husband spent three years, she as a teacher and he as a preacher. Showed beautiful material made by Chinese people. Mrs. Robertson reported on C.A.C. annual meeting she attended in Sherbrooke. Brompton Road: June meeting was Grandmother's Day. All received corsages and each was given a cup and saucer. A darning contest was held with Mrs. Alice McLeod being the winner. Home Economics Convener gave strawberry recipes. This branch has donated an ironing board to the Wales Home. Lennoxville: Meeting held in the delightful surroundings of the Reveillon Club. Articles read on the growing and planting of shrubs.





Mary Walsh of Douglastown, Gaspé County, was recently presented with a medallion by Mrs. Raymond Kennedy, Convener for the Children's Fair. Mary received the medallion for having won first prize three years in a row.

The Citizenship Convener reported on the abolition of corporal punishment in the schools, passed recently by the Quebec Federation of Home and School Association. A collection of slides to be sent to the Tweedsmuir Competition. During the meeting, members busied themselves repairing children's clothing for the Maplemount Home. Milby: Mrs. William Suitor won First Prize on crewel embroidered cushion at county level. On Grandmother's night, wedding pictures were passed around. It was noted that Mr. and Mrs. Johnston Beattie celebrated their 57th Anniversary on June 4. A brooch and bracelet, over a hundred years old, belonging to a grandmother of one of the members was shown.

#### Stanstead

Ayer's Cliff: Saw slides taken by Captain and Mrs. W. E. Brown on a recent trip to Ceylon, Bankok and Australia. Stanstead North: Decided, because of their interest in the North Shore communities, to send ditty bags to that area this year. Agreed to furnish refreshments and helpers for the afternoon session of the annual Red Cross Blood Donors' Clinic at Rock Island. Mrs. W. J. Current, a former CBC broadcaster on home economics and consumer problems, gave a talk on phosphate pollution. She explained how it works, and how to minimize it by using soap wherever the water is soft enough, or a water softener such as borax or sal soda which do not contain large amounts of phosphate. She answered many question asked by interested members. Later the branch enjoyed a skit put on by three members.

#### ACWW Month

The Associated Country Women of the World with members in 67 countries has an estimated membership of 6½ million women. At the Council meeting in London in September, 1969, it was agreed to ask member societies to keep the month of October in each year as "ACWW Month". We would ask that each Institute branch make their October meeting truly international, with emphasis on the many activities of the ACWW. These activities include: Triennial World Conferences, Regional Conferences, Educational Seminars, Lady Aberdeen Scholarship Fund, Projects Fund, Publication of bi-monthly magazine "The Country-woman", Consultative status with United Nations: represented on FAO, UNESCO and UNICEF, Letter Friends, Introductions and Exchange Programs. Their aim: To raise the standard of living of rural women and homemakers everywhere and to further international friendship.

#### Welfare and Health Outline for 1970-71

Convention is over and we have a new year's work ahead. Many of our projects and studies are the same as last year but are still urgent. One of the most pressing is the use of drugs by our youth. How can we understand the reasons for the young using drugs? How can we educate them to the dangers? How can we bridge the generation gap? Some way has to be found to reach them and for us to try and understand each other. This could be a project and there are others. Retarded children, their care and education and the aged are still our concern.

Assist in every way to combat pollution.

How about having demonstrations or classes in home nursing, bathing a new baby, first aid, etc. St. John Ambulance, local nurses and the Red Cross are sources for help and information. Have programs on safety in the home, safety from household cleaners, from drugs such as headache tablets and sleeping pills which we take for granted and which could be deadly to a child. I strongly recommend a film which can be obtained from Macdonald College, Extension Film Library: The film is entitled "One Day's Poison" and I'm sure it will surprise you!

Promote ways of keeping healthy. Study such diseases as cancer, heart disease, diabetes, mental health, the links between cigarette smoking and lung cancer. Learn what the signs and symptoms are and how they can alert us in time to see our doctors.

You have many projects to choose from and I wish you a successful year.

Anne Robertson,  
Provincial Convener of  
Welfare and Health.

#### Eskimo Children Need Comic Books

Not much needs to be added to this letter received in Edmonton from an Eskimo youngster at Grise Fiord, Northwest Territories: "Grise Fiord is little. We cannot buy comic books here. Does anyone in Edmonton have any they could send us? We like all kinds. Yours truly, Lucy."



We might add that Grise Fiord, population 90, is 3,500 air miles northeast of Edmonton and that it is the farthest north school in the Western Hemisphere.

Schoolteacher, Carol Gilchrist, an ex-Edmontonian who forwarded the letter to the Edmonton Journal, adds that parcel post rates to Grise Fiord are a bargain because the settlement is charged only surface mail rates. Mail is flown from Montreal. She says to address the books, and colouring books would be welcome too, to: The ESKI-TOTS, c/o Miss Carol Gilchrist, Grise Fiord, N.W.T., via Montreal amf.

Her letter writing was suddenly interrupted by an Eskimo hunter who shot a polar bear outside the school. It was an hour before classroom routine was restored.

#### Family Dinner

From left to right: Eric Osborne, North Shore student visits with W.I. President, Mrs. R. Ashman, Mrs. Howard Aikman, W.I. member, chats with Betty Cornmeir of Latabatier, a Grade XI student and with Mr. Aikman. The occasion was a family dinner at which the members of the Stanstead North W.I. and their families entertained 25 young people from the North Shore and their chaperones, Mr. and Mrs. Thomas Laming.

The young people are students at the Alexander Galt Regional School at Lennoxville. On their way to dinner, the students visited the old brick schoolhouse, now restored by the branch and used as its meeting place. Afterwards they made a tour of Sunnyside School and saw a film on sealing which was shown by Mr. Fred Robertson, a former North Shore resident. They also saw slides of that area taken and shown by Mr. Howard Aikman.







## Opening Ode (with additional verses)

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 A goodly thing it is to meet  
In friendship's circle bright  
Where nothing stains the pleasure sweet  
Nor dims the radiant light.


---

 No unkind word our lips shall pass.  
No envy sour the mind,  
But each shall seek the common weal  
The good of all man kind.


---

 So let us then together join  
Let's sing with all our heart  
And liven up our meetings so  
That all will take a part.


---

 For all have hidden talents,  
If each will only try  
To express herself in words and deeds  
In sharing be not shy.

---

 That way we'll have a heap of fun  
We'll work and learn and grow  
In knowledge, art and friendship  
True helpfulness will flow.

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 For I need you, and you need me,  
Alone we cannot thrive.  
But the \_\_\_\_\_ Women's Institute  
Our spirits will revive.

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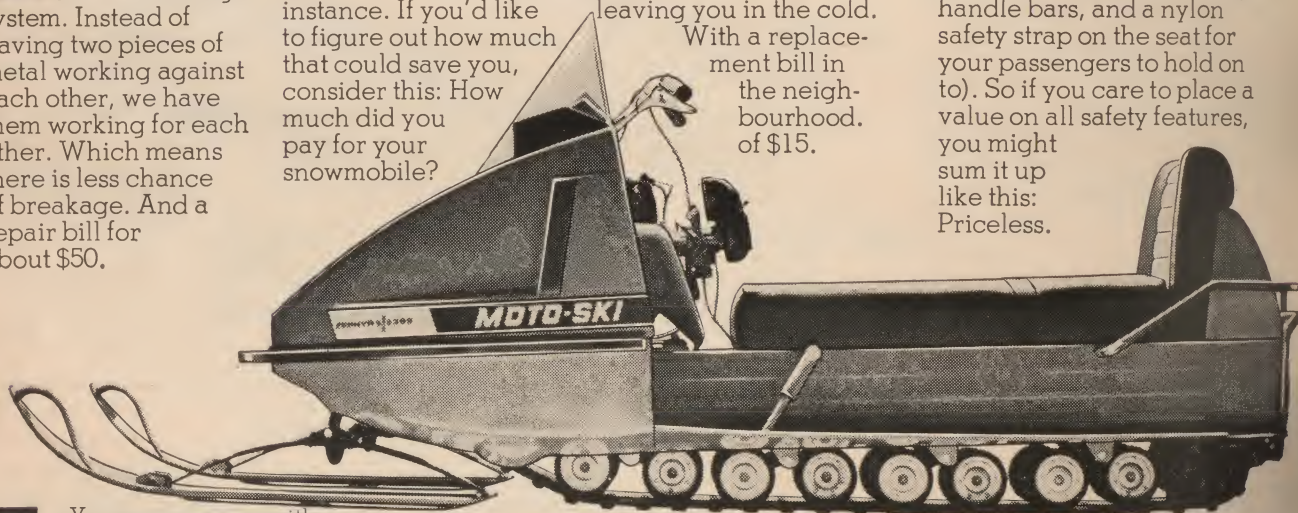
# You won't keep paying after it's paid for.

**1.** You save with our ball and socket steering system. Instead of having two pieces of metal working against each other, we have them working for each other. Which means there is less chance of breakage. And a repair bill for about \$50.

**2.** You save money with our dual headlights. Because they make it twice as easy to see what's ahead of you at night. Like a tree, for instance. If you'd like to figure out how much that could save you, consider this: How much did you pay for your snowmobile?

**3.** You save with our thermo control cables. Moto-skis have the kind of cables that airplanes use. So they're less likely to freeze up, leaving you in the cold. With a replacement bill in the neighbourhood of \$15.

**4.** You save with our safety features. They not only make the machine safer, they make you safer (with things like a motor shut-off switch that is just where it should be—on the handle bars, and a nylon safety strap on the seat for your passengers to hold on to). So if you care to place a value on all safety features, you might sum it up like this: Priceless.



**5.** You save money with our chassis. Because it's welded heavy gauge steel, for strength and rigidity. Which means it'll never lose its shape. And you'll never lose your money. Because you would probably pay well over \$100 to have a bent chassis unbent.

**6.** You save with our suspension system. It's specially designed to be more rugged. And to help you get over little trouble spots. Like a \$63 repair bill for overhauling a run down suspension system.

**7.** You save with our track of vulcanized rubber and nylon cord. Instead of putting bars on the inside of the rubber, we put cleats on the outside. If you break a cleat, you pay 90¢ for a new one. Not \$90 for a new track. If the track separates, you pay nothing. Because our track has the longest guarantee in the business. Two years for one cylinder models. One year for two cylinder models.

So far, the Moto-ski has saved you a tidy sum. And we haven't even mentioned things like our double wall construction, or our cam drive clutch. Or, all the time you would waste having repairs done.

The 1971 Moto-ski. Buy one now. Don't pay later.

**MOTO-SKI**  
We're tougher 7 ways.





## TO REDUCE FEEDING COSTS

Use WIB Pure Cane Molasses. At today's cost it is cheaper than grains!

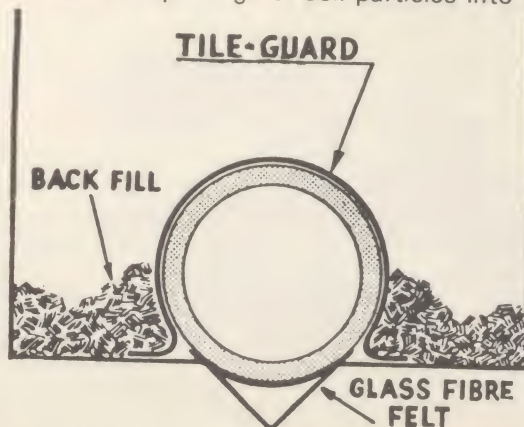
*Your dealer will  
make prompt  
delivery.*

38



## NOW . . . Prevent FARM DRAINAGE TILE CLOGGING With "Tile Guard" and "Glass Fibre Felt"

"Tile Guard" Drainage Tile Cover is a web-like mat composed of inert glass fibres made of materials specifically compounded to withstand underground alkalis and acids. It is virtually ageless, and effectively retards the passage of soil particles into the tile.



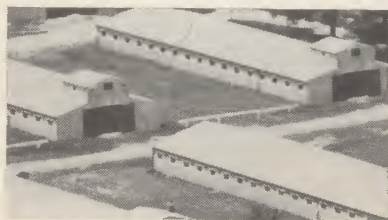
Permits use of smaller tile.  
Why use 6" when 4" will  
do with Tile Guard and

GLASS FIBRE FELT  
For Under Support  
and Protection  
in Unstable  
Soils

MR. FARMER: Discuss your problem with The County Agricultural Representative or Extension Specialist. For complete information at no obligation write or telephone collect to:

## GLOBE GLASS SATURATORS LIMITED

*Manufacturers of Glass Fibre Roofing Products and Tile Guard*  
P. O. BOX 190 PETROLIA, ONTARIO DIAL 882-2300  
or Request Material from Your Drainage Contractor.



**SIGN OF PROGRESS IN THE SCIENCE AND DEVELOPMENT OF FEED**



# Purina objective: Total Value Service



Ralston Purina Company is dedicated to the belief that in this fast changing era, the feed business involves much more than manufacturing and selling feed.

Traditionally a service-minded organization, Purina today is dedicated to a reemphasis of customer service in the broadest sense. The objective is to offer programs which will give customers the best TOTAL VALUE in the feed industry.

These best TOTAL VALUE programs are designed to provide combinations of products and services that will bolster the customer in all phases of his business and help him earn a

stable profit. They include a broad ability to assist the producer in all aspects of production, and also to help him in the complicated business of marketing the end product.

Purina sees the feed industry as a vital, creative component of the great American food producing business. Purina's interest in its customers does not cease until the feeders' end products are successfully marketed.

For details on how Purina can serve you, write Mr. Robert L. Gamelin, Vice-President Regional Director of Operations, Ralston Purina of Canada Limited, 529 Ste-Hélène Street, Longueuil, Que. Code 514 - Number 674-6203.

